



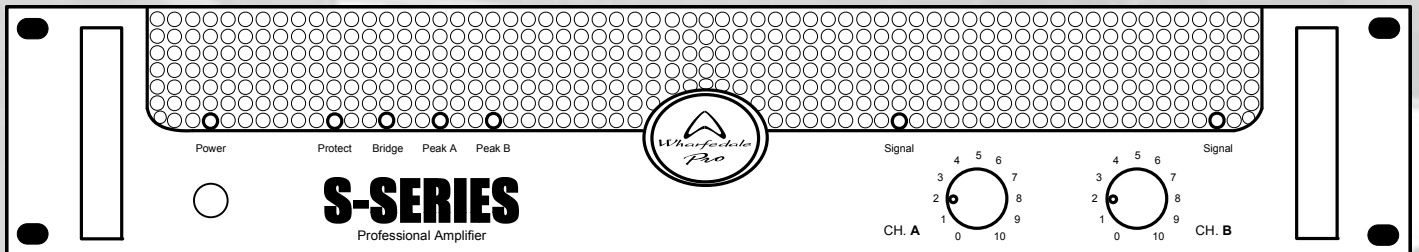
# S-SERIES

PROFESSIONAL POWER AMPLIFIERS

**S-1000**

**S-1500**

**S-2500**



**OWNER'S MANUAL**

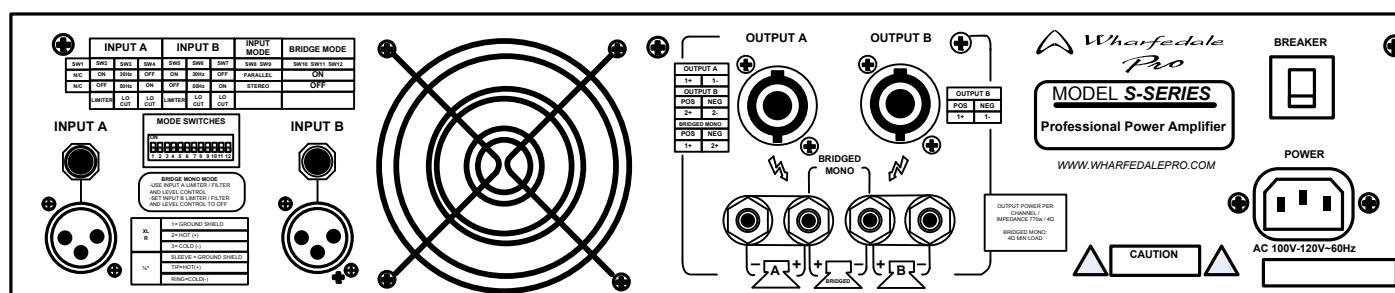
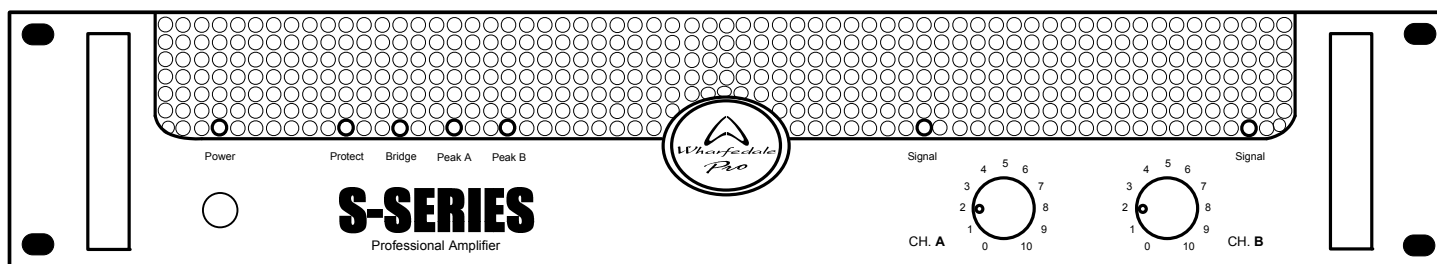
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## S-SERIES Professional Amplifiers

## FRONT AND REAR PANEL REFERENCE DRAWINGS



### **WARNINGS AND WARRANTY INFORMATION**

**Unpacking:** All Wharfedale Pro products are fully tested before leaving the factory. After unpacking, please inspect the unit. In the event of any noticed damage due to shipping, contact your dealer and the shipping provider immediately to file a shipping damage claim. Retain the shipping carton and all packaging material in case the unit needs to be returned.

1. **READ ALL INSTRUCTIONS** carefully and become familiar with the features and functions of this product before operating it.
2. **RETAIN THESE INSTRUCTIONS** for future reference.
3. **COMPLY WITH ALL WARNINGS** – All warnings and instructions for this product should be adhered to.
4. **USING AMPLIFIERS** – In order to avoid damage to equipment, it is advisable to establish and follow a routine for powering up and powering down a sound system. With all system components connected, turn on source equipment (mixers, signal processors, record and playback units, etc.) **BEFORE** powering up amplifiers. Transient voltages from powering up source equipment can damage speakers if amplifiers are turned on. Make sure that amplifier volumes are set to their minimum settings and power up any system amplifiers **LAST**. It is recommended that all system components be allowed to stabilize for several seconds before any source signals are introduced or level setting adjustments are made. Similarly, when shutting systems down, turn all amplifiers off first, before powering down any other system components.
5. **CABLES** – Do not use shielded or microphone cables for connection between amplifiers and speakers. Use only approved speaker cables with proper connectors.
6. **CAUTION** – The S Series professional amplifiers are capable of generating very high sound pressure levels. Use care with operation to avoid exposure to excessive volume levels that can cause permanent hearing damage if operated to extremes.
7. **SERVICE** – There are no user serviceable parts inside this product. Users should not attempt to service this product. Potential dangerous voltages and shock hazards are present inside this product. Warranty nullification could result if this is attempted.

#### **Wharfedale Pro Limited Warranty**

\*Wharfedale Pro **SR** Series amplifiers are warranted to the original purchaser against manufacturing or materials defects for a period of one year from the original date of purchase. Faults arising from misuse, unauthorized modifications or accidents are not covered under this warranty. No other warranty is expressed or implied. In the event of malfunction, contact your authorized Wharfedale Pro dealer or distributor for information.

\*Be aware that warranty details may differ from country to country. Contact your dealer or distributor for information.

### **Introduction**

Thank you for your purchase of a Wharfedale Pro S-Series professional power amplifier.

Please read this manual completely to ensure proper operation and complete understanding of the features of these products.

The Wharfedale Pro S-Series power amplifiers are designed for ease of use, and quality audio performance in portable sound reinforcement applications.

#### **S-1000**

**Stereo mode:** 200 Watts per channel into 8 ohms (0.1% THD at 1kHz)  
330 Watts per channel into 8 ohms (0.1% THD at 1kHz)  
500 Watts per channel into 8 ohms (0.1% THD at 1kHz)

**Bridged mode:** 660 Watts into 8 ohms (0.1% THD at 1kHz)  
1000 Watts into 8 ohms (1% THD at 1kHz)

#### **S-1500**

**Stereo mode:** 320 Watts per channel into 8 ohms (0.1% THD @ 1kHz)  
500 Watts per channel into 4 ohms (0.1% THD @ 1kHz)  
750 Watts per channel into 2 ohms (0.1% THD @ 1kHz)

**Bridged mode:** 1000 Watts into 8 ohms (0.1% THD @ 1kHz)  
1500 Watts into 4 ohms (1% THD @ 1kHz)

#### **S-2500**

**Stereo mode:** 500 Watts per channel into 8 ohms (0.1% THD @ 1kHz)  
770 Watts per channel into 4 ohms (0.1% THD @ 1kHz)  
1250 Watts per channel into 2 ohms (0.1% THD @

1kHz)

**Bridged mode:** 1500 Watts into 8 ohms (0.1% THD @ 1kHz)  
2500 Watts into 4 ohms (1% THD @ 1kHz)

## **Getting Started**

### **1. AC Power Connections**

All S-Series power amplifiers are equipped with an internal AC power supply. Connect the appropriate grounded IEC power cable to the power amp BEFORE connecting it to the power outlet.

It is important to allow adequate ventilation to the powered mixer as it may become warm during extended periods of operation.

Each S-Series amp is shipped with the correct power cable for the country in which it is to be used. The S-Series amps are NOT to be used in a country using a different source supply voltage other than for which it is designed. Note the operating voltage shown near the AC power cord jack and ONLY connect this unit to the appropriate AC source voltage.

### **2. Packing**

The packaging has been designed protect the mixer during transit. If any shipping damage has occurred, consult your dealer and the shipping provider.

### **3. Safety**

Avoid excessive heat, humidity, dust and vibration. Store and operate the power amplifier away from high temperatures or humidity. Also, avoid locations which may be subject to excessive dust and vibration / physical shocks that could cause mechanical damage to the amp.

**WARNING: REFER ALL MAINTENANCE, REPAIRS AND MODIFICATIONS TO QUALIFIED SERVICE PERSONNEL! THIS PRODUCT CONTAINS NO USER-SERVICEABLE PARTS!**

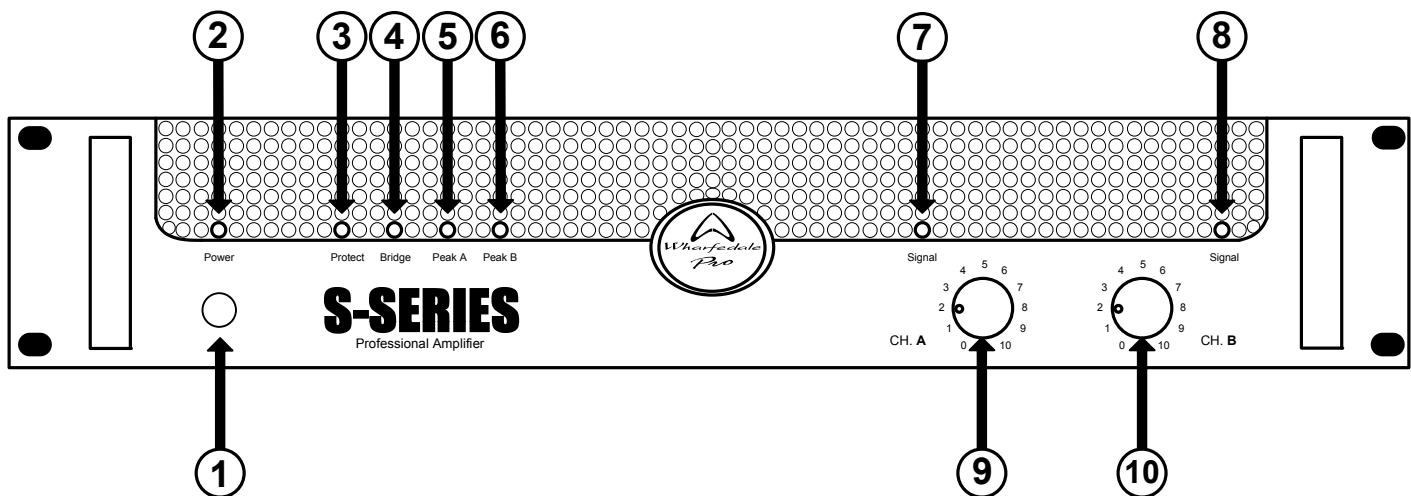
For the protection of the amplifier and other audio equipment, always turn off the power on the amplifier and other system components before connecting or disconnecting audio cables.

### **4. Warranty**

The S-Series power amplifiers are covered, by limited warranty, of any defects in workmanship for a period of one year from the date of purchase. This warranty is non-transferable and applies only to the original purchaser. If any warranty related issues occur, contact your dealer.

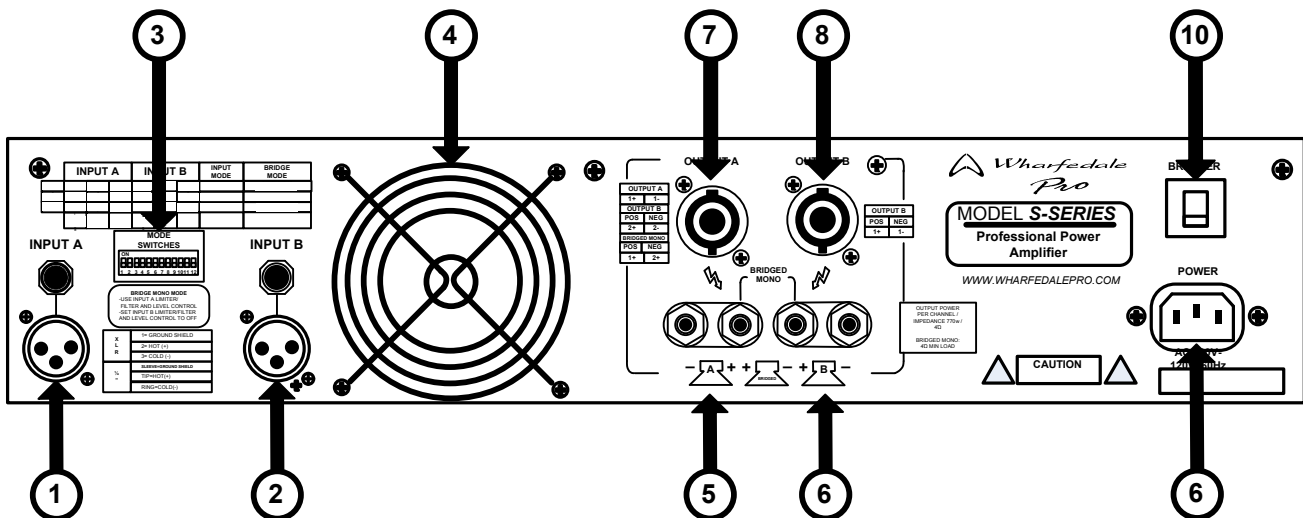
### FRONT PANEL - FEATURES AND CONTROLS

1. **Power switch:** Push to turn power on or off.
2. **Power On LED:** This LED lights when the power is on for the amplifier.
3. **Protect LED:** This LED will light up when a fault is detected in the amplifier operation.
4. **Bridge LED:** This LED lights up when the amplifier is set to BRIDGED mode.
5. **Peak A LED:** This LED indicates overload of the signal of Channel A
6. **Peak B LED:** This LED indicates overload of the signal of Channel B
7. **Channel A Signal Present LED:** Indicates presence of signal on Channel A.
8. **Channel B Signal Present LED:** Indicates presence of signal on Channel B.
9. **Channel A Signal Level Control:** This knob controls the output level of Channel A.
10. **Channel B Signal Level Control:** This knob controls the output level of Channel B.



## REAR PANEL – FEATURES AND CONTROLS

- 1. INPUT “A” XLR and 1/4” Balanced Line Input jacks:** These XLR inputs are balanced input jacks and 1/4” TRS (Tip / Ring / Sleeve) balanced / unbalanced inputs. These jacks are designed to be connected to +4dBu balanced or unbalanced line level sources.
- 2. INPUT “B” XLR and 1/4” Balanced Line Input jacks**
- 3. MODE Switches:** Allows for selection of various operating modes for the amplifier.
- 4. Cooling Fan:** This fan provides air flow and cooling to the internal amplifier components.
- 5. OUTPUT “A” Binding Post Outputs:** Positive and negative binding posts are provided for connection to speakers via banana plug, spade terminal or bare wire connections.
- 6. OUTPUT “B” Binding Post Outputs**
- 7. OUTPUT “A” Speakon Output Jacks:** Speakon®-type connector provided for connection of the output of the amplifier to speakers. These outputs are rated for speaker connections of 4 to 8 ohms.
- 8. OUTPUT “B” Speakon Output Jacks**
- 9. AC Power jack:** Plug the appropriate A/C power cord to this connector.  
**WARNING:** DO NOT ATTEMPT TO BYPASS THE GROUND CONNECTION OF THE POWER CORD!
- 10. Circuit Breaker:** Provides short circuit protection to amplifier outputs.

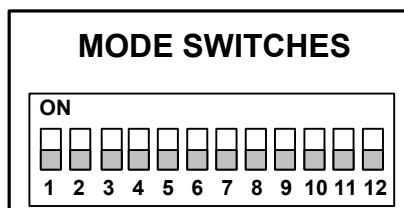




# S-SERIES Professional Amplifiers

## INPUT A & B MODE SWITCHES

The MODE SWITCHES for the S-2500 provide the means to configure the amplifier in for a variety of different applications. The following legend shows the available selections.



	INPUT A			INPUT B			INPUT MODE	BRIDGE MODE
SW1	SW2	SW3	SW4	SW5	SW6	SW7	SW8 SW9	SW10 SW11 SW12
N/C	ON	30Hz	OFF	ON	30Hz	OFF	PARALLEL	ON
N/C	OFF	50Hz	ON	OFF	50Hz	ON	STEREO	OFF
	LIMITER	LO CUT	LO CUT	LIMITER	LO CUT	LO CUT		

Switch 1: is not used

### INPUT A

Switch 2: Engages the signal **LIMITER** in the **ON** (up) position and disengages it when **OFF** (down).

Switch 3: Selects the **LO CUT** roll off frequency of **30Hz** in the up position and **50Hz** in the down position.

Switch 4: Engages the **LO CUT** filter in the **ON** (up) position and disengages it in the **OFF** (down) position. (This is a -12dB per octave filter slope).

### INPUT B

Switch 5: Engages the signal **LIMITER** in the **ON** (up) position and disengages it when **OFF** (down).

Switch 6: Selects the **LO CUT** roll off frequency of **30Hz** in the up position and **50Hz** in the down position.

Switch 7: Engages the **LO CUT** filter in the **ON** (up) position and disengages it in the **OFF** (down) position. (This is a -12dB per octave filter slope).

### OUTPUTS

Switches 8 & 9: Engage the **PARALLEL** input signal configuration in the up position and engages **STEREO** input configuration when down.

Switch 10 , 11 & 12: Selects the **BRIDGE** output mode in the up position and disengages it (normal stereo mode) in the down position.

## **MODE SWITCH OPERATION**

### **LIMITER**

A limiter is a circuit that prevents signal overload and distortion in an audio signal path. When engaged, the internal limiter circuit will keep the audio signal from going over a preset level threshold, thereby helping to prevent signal distortion within the amplifier and in the speaker system. The limiter also serves to prevent speaker damage. The limiter function can be engaged by engaging **MODE SWITCHES SW2** (for INPUT A) and **SW5** (for INPUT B) in the up “**ON**” position.

### **LO CUT**

**MODE SWITCHES SW3, SW4** (for INPUT A) and **SW6, SW7** (for INPUT B) provide the options of low frequency filtering starting at the **30Hz** and **50Hz** frequency ranges and frequencies below those points. These filters “roll off” the lower bass frequency range to help eliminate unwanted “boominess” in the sound system with a -12dB per octave slope. MODE Switch **SW4** engages the “**LO CUT**” filter and Switch **SW3** selects between the **30Hz** (in the up, “**ON**” position) and **50Hz** (in the down “**OFF**” position).

### **INPUT MODE**

The **INPUT MODE** switches select the operating mode of the amplifier. **STEREO** mode allows the unit to function as a two channel amplifier with each input (**INPUT A & INPUT B**) routed to a separate amplifier output (**OUTPUT A & OUTPUT B**), respectively.

**PARALLEL** mode sums the signals of **INPUT A** and **INPUT B** together and routes the combined signal to both **OUTPUT A** and **OUTPUT B**.

### **BRIDGE MODE**

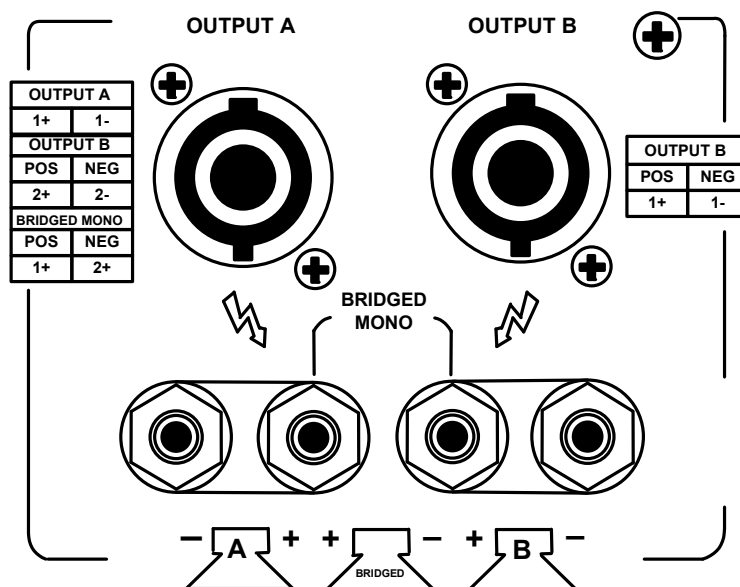
This mode allows you to combine the amplifier outputs for more power. **MODE SWITCHES #10, 11** and **12** control this function. **BRIDGE MODE** can provide nearly three times more power output than operating the amp in **STEREO** mode.

When in **BRIDGE MODE**, only the controls on **INPUT A** are functional. **INPUT B MODE SWITCH** settings have no affect on the operation of the amplifier when in **BRIDGE MODE** and the volume control for **INPUT B** should be set all the way down when operating in this mode.

**BRIDGE MODE** provides a single 4Ω or 8Ω output for connection to an equivalent speaker impedance load. Be aware of the increased power output that **BRIDGE MODE** provides and be sure that all speakers have appropriate power handling capabilities before making connections otherwise speaker damage may occur. Speaker wiring for **BRIDGE MODE** is made via the two middle output binding post terminals. See pages **10** and **13** for **BRIDGE MODE** wiring details.

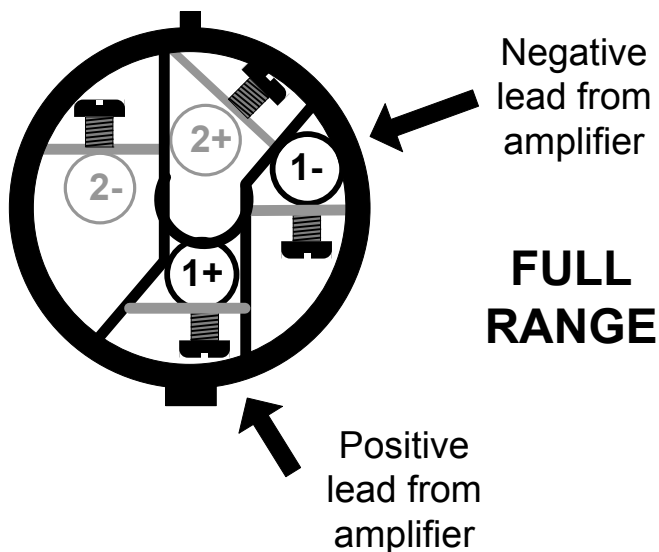
## OUTPUT “A” AND “B” WIRING OPTIONS

Output wiring options consist of NL-4 “Speakon®-type” female connectors for the left and right outputs along with industry standard binding posts for direct wiring connections or wiring with banana plugs.

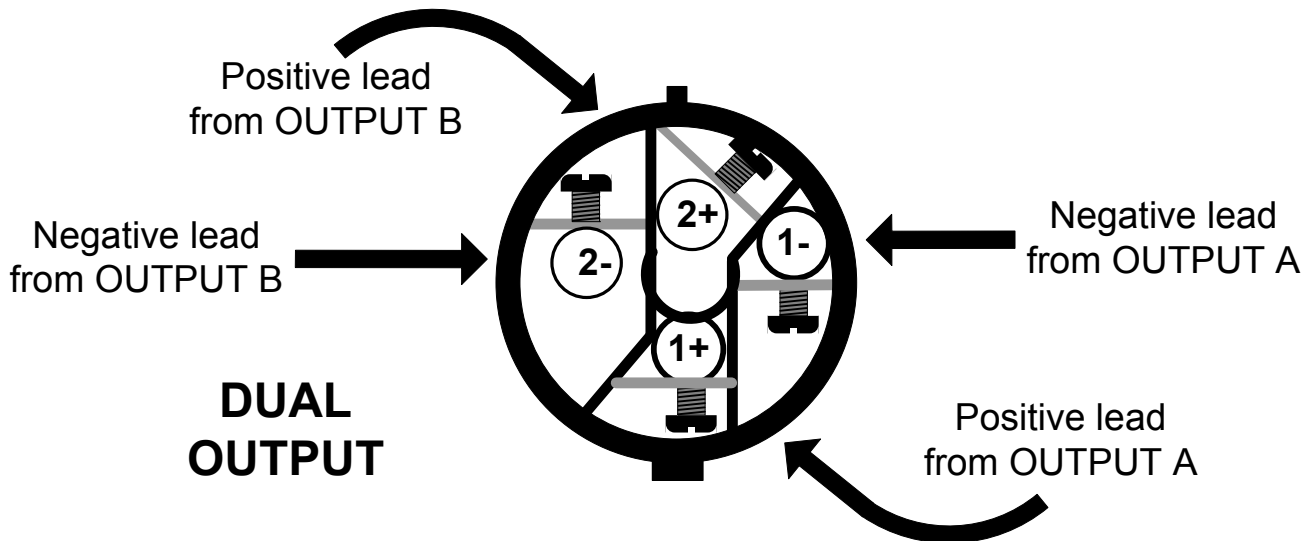


### NL-4 CONNECTOR WIRING OUTPUT “A” & “B” FULL RANGE:

**FULL RANGE**  
1+ = POSITIVE  
1- = NEGATIVE



**USING OUTPUT JACK "A" NL-4 FOR BOTH OUTPUTS**



**FULL RANGE SHARED OUTPUT**

**1+ = POSITIVE - OUTPUT A**  
**1- = NEGATIVE - OUTPUT A**  
**2+ = POSITIVE - OUTPUT B**  
**2- = NEGATIVE - OUTPUT B**

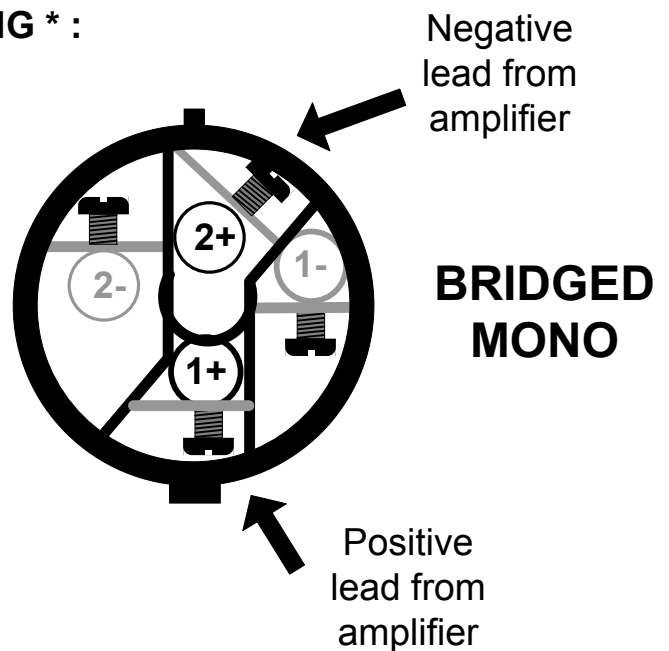
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**BRIDGED-MONO MODE NL-4 WIRING \* :**

**USING OUTPUT "A" NL-4**

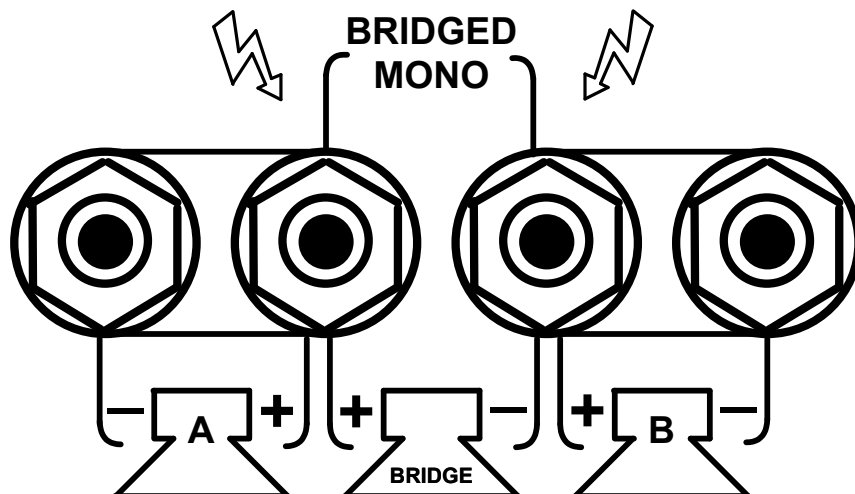
**BRIDGED MODE**

**1+ = POSITIVE**  
**2+ = NEGATIVE**



\* SEE DETAILS ABOUT BRIDGE MODE  
SWITCH SETTINGS ON PAGE 7 and 13

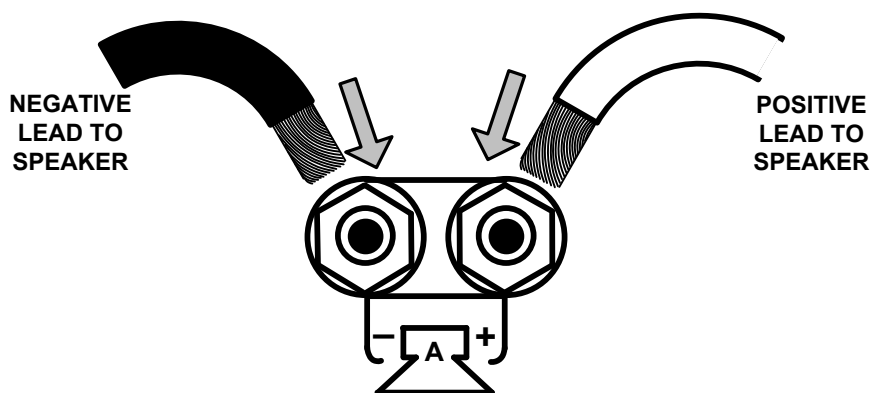
### **BINDING POST WIRING OPTIONS**



As shown in the graphic above, the stereo and bridged mono applications can be connected as indicated. Binding post wiring can be done with spade connectors, bare wire ends tightened into the binding posts or via banana plugs inserted into the end of the binding posts.

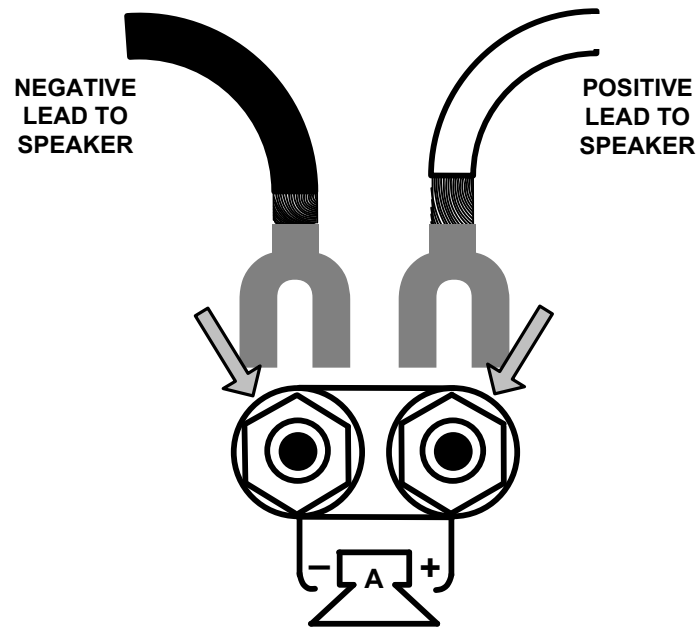
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### **CONNECTING BARE ENDED SPEAKER CABLE LEADS**



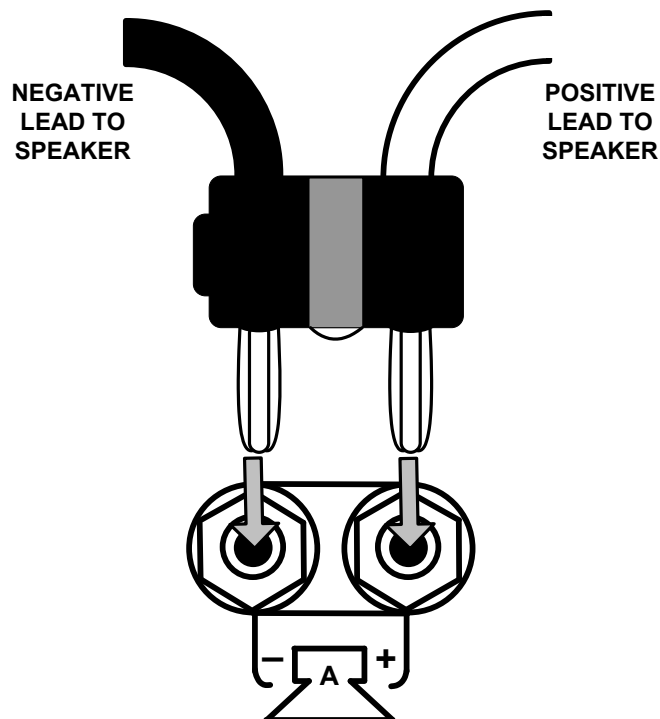
Strip away approximately 1/2" (12mm) of insulation from the speaker wire. Twist the bare copper wire ends tightly. Unscrew each binding post, insert the wire into the hole in the metal portion of the binding post and tighten the binding post securely. Be care of stray wire strands that could cause shorts.

## CONNECTING SPEAKER CABLE WITH SPADE LUGS

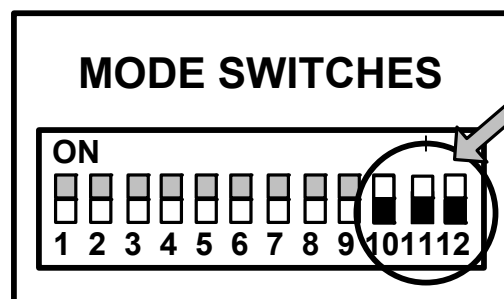
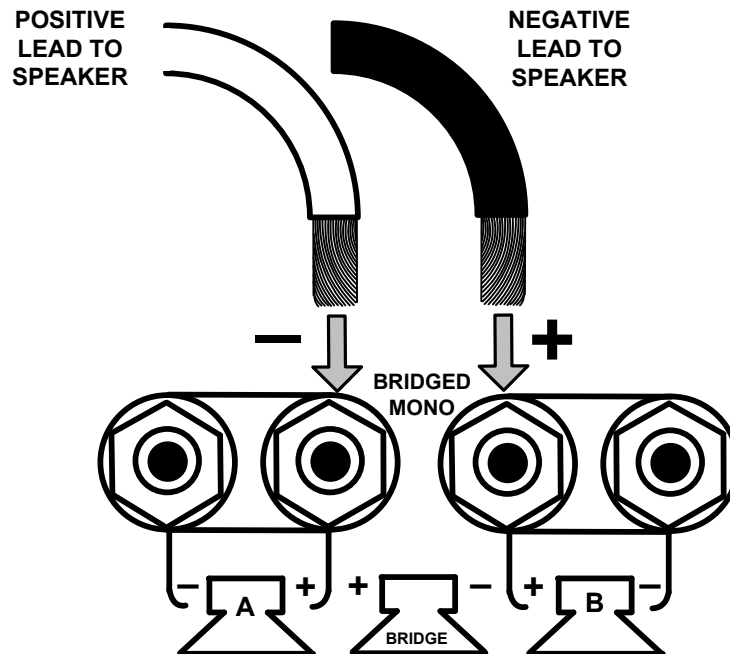


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## CONNECTING SPEAKER CABLE WITH BANANA PLUGS



## CONNECTING SPEAKER CABLE BRIDGED-MONO



BRIDGED-MONO  
MODE REQUIRES  
SWITCH #10, #11 & #12  
TO BE IN THE "UP"  
(ON) POSITION

## **GENERAL OPERATING INSTRUCTIONS**

Make sure that the power switch is set to the OFF position while making connections to and from the power amplifier. Connect all external components. Speakers, Microphones, instruments, etc. Check for secure connections.

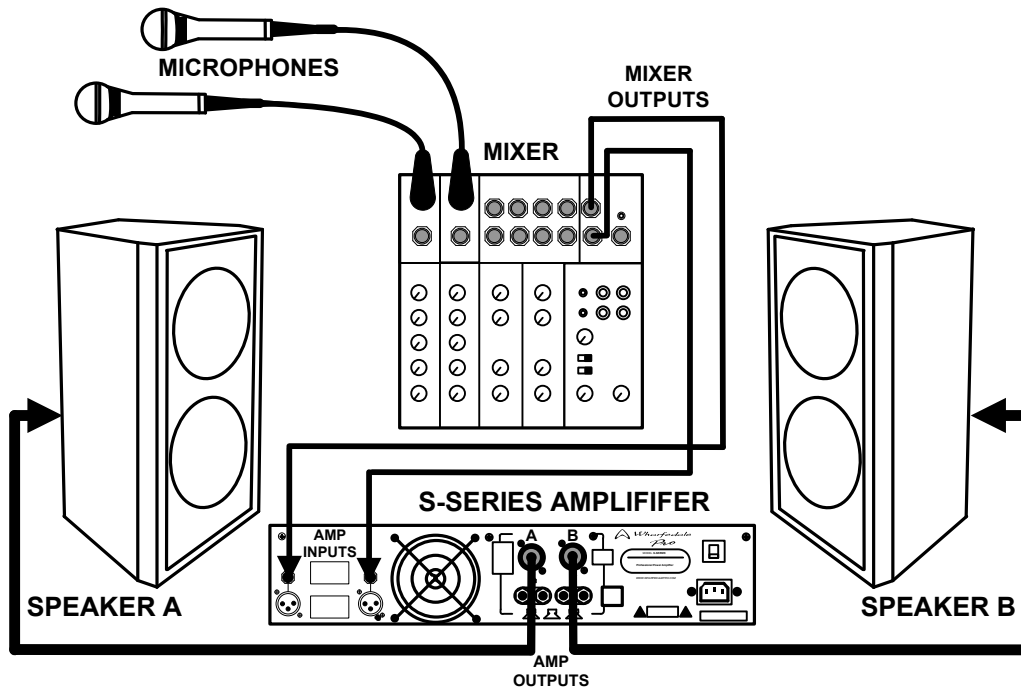
Turn all level controls down on mixers, amplifiers and signal processing devices.  
Connect the A/C power cord to the power outlet of the amplifier.

After powering up all other devices first, turn the power switch on the amplifier to the 'ON' position and verify that the POWER LED is lit.

Turn the amplifier volume control up to the "7" setting. (This setting can be adjusted higher or lower, as needed, after set-up).

With the source signal present (a person singing in to a microphone or and instrument playing), adjust the various signal levels as needed. Make any needed overall volume adjustments with the volume control on the mixer and the amplifier. When powering down, make sure any external power amps are switched off first.

## **BASIC STEREO SOUND SYSTEM HOOKUP**





## S-SERIES Professional Amplifiers

<b>S-1000 SPECIFICATIONS</b>	
<b>Output Power</b>	<b>Stereo:</b> 180W+180W/8Ω (0.1% THD at 20Hz-20kHz) 300W+300W/4Ω (0.1% THD at 20Hz-20kHz) 200W+200W/8Ω (0.1% THD at 1kHz) 330W+330W/4Ω (0.1% THD at 1kHz) 500W+500W/2Ω (0.1% THD at 1kHz) <b>Bridged:</b> 600W/8Ω (0.1% THD at 20Hz-20kHz) 660W/8Ω (0.1% THD at 1kHz) 1000W/4Ω (1% THD at 1kHz)
<b>THD+N</b>	<0.02%
<b>Frequency Response</b>	20Hz-20kHz 0/-0.5dB 10Hz-40kHz 0/-2dB
<b>Hum and Noise</b>	-95dB
<b>Voltage Gain</b>	33dB
<b>Input Sensitivity</b>	+4dBu
<b>Maximum Input Level</b>	+22dBu
<b>Input Impedance</b>	Balanced: 20kΩ; Unbalanced: 10kΩ
<b>Controls</b>	
Low Cut Filter:	50Hz -6dB(-12dB/oct); 30Hz -6dB(-12dB/oct)
SIGNAL Indicators:	Turns on approx -35dBu
CLIP indicators:	Turns on approx 350Wx2/4Ω output
Limiter:	Turns on approx 350Wx2/4Ω output
Amplifier Protection:	Mute function; DC detection; Overload and short detection; Temperature detection
<b>Power Amp Type</b>	Class AB complementary linear output
<b>AC Power Options</b>	AC100V / 120V / 220V / 240V, 50/60Hz
<b>Dimensions (HxWxD)</b>	
mm	96mm x 482.6mm x 427mm
inches	3.8" x 19" x 16.8"
<b>Weight</b>	
kg	15.4kg
lbs	33.9lbs

Product details, features and specifications subject to change without notice.

## S-SERIES Professional Amplifiers

<b>S-1500 SPECIFICATIONS</b>	
<b>Output Power</b>	<b>Stereo:</b>
	300W+300W/8Ω (0.1% THD at 20Hz-20kHz)
	450W+450W/4Ω (0.1% THD at 20Hz-20kHz)
	320W+320W/8Ω (0.1% THD at 1kHz)
	500W+500W/4Ω (0.1% THD at 1kHz)
	750W+750W/2Ω (0.1% THD at 1kHz)
	<b>Bridged:</b>
	900W/8Ω (0.1% THD at 20Hz-20kHz)
	1000W/8Ω (0.1% THD at 1kHz)
	1500W/4Ω (1% THD at 1kHz)
<b>THD+N</b>	<0.02%
<b>Frequency Response</b>	20Hz-20kHz 0/-0.5dB
	10Hz-40kHz 0/-2dB
<b>Hum and Noise</b>	-95dB
<b>Voltage Gain</b>	33dB
<b>Input Sensitivity</b>	+4dBu
<b>Maximum Input Level</b>	+22dBu
<b>Input Impedance</b>	Balanced: 20kΩ; Unbalanced: 10kΩ
<b>Controls</b>	
Low Cut Filter:	50Hz -6dB(-12dB/oct); 30Hz -6dB(-12dB/oct)
SIGNAL Indicators:	Turns on approx -35dBu
CLIP indicators:	Turns on approx 490Wx2/4Ω output
Limiter:	Turns on approx 506Wx2/4Ω output
Amplifier Protection:	Mute function; DC detection; Overload and short detection; Temperature detection
<b>Power Amp Type</b>	Class AB complementary linear output
<b>AC Power Options</b>	AC100V / 120V / 220V / 240V, 50/60Hz
<b>Dimensions (HxWxD)</b>	
mm	96mm x 482.6mm x 427mm
inches	3.8" x 19" x 16.8"
<b>Weight</b>	
kg	16.3kg
lbs	35.9lbs

Product details, features and specifications subject to change without notice.

## S-SERIES Professional Amplifiers

<b>S-2500 SPECIFICATIONS</b>	
<b>Output Power</b>	<b>Stereo:</b>
	490W+490W/8Ω (0.1% THD at 20Hz-20kHz)
	700W+700W/4Ω (0.1% THD at 20Hz-20kHz)
	500W+500W/8Ω (0.1% THD at 1kHz)
	770W+770W/4Ω (0.1% THD at 1kHz)
	1250W+1250W/2Ω (0.1% THD at 1kHz)
	<b>Bridged:</b>
	1400W/8Ω (0.1% THD at 20Hz-20kHz)
	1500W/8Ω (0.1% THD at 1kHz)
	2500W/4Ω (1% THD at 1kHz)
<b>THD+N</b>	<0.03%
<b>Frequency Response</b>	20Hz-20kHz 0/-0.5dB
	10Hz-40kHz 0/-2dB
<b>Hum and Noise</b>	-95dB
<b>Voltage Gain</b>	33dB
<b>Input Sensitivity</b>	+4dBu
<b>Maximum Input Level</b>	+22dBu
<b>Input Impedance</b>	Balanced: 20kΩ; Unbalanced: 10kΩ
<b>Controls</b>	
Low Cut Filter:	50Hz -6dB(-12dB/oct); 30Hz -6dB(-12dB/oct)
SIGNAL Indicators:	Turns on approx -35dBu
CLIP indicators:	Turns on approx 800Wx2/4Ω output
Limiter:	Turns on approx 840Wx2/4Ω output
Amplifier Protection:	Mute function; DC detection; Overload and short detection; Temperature detection
<b>Power Amp Type</b>	Class H complementary linear output
<b>AC Power Options</b>	AC100V / 120V / 220V / 240V, 50/60Hz
<b>Dimensions (HxWxD)</b>	
mm	96mm x 482.6mm x 427mm
inches	3.8" x 19" x 16.8"
<b>Weight</b>	
kg	17.7kg
lbs	39lbs

Product details, features and specifications subject to change without notice.



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